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LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			EXAMINER SYED, FARHAN M	
			ART UNIT 2165	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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lhptoms@leehayes.com

**Office Action Summary**

Application No.

10/782,254

Applicant(s)

EPPELEY ET AL.

Examiner

Farhan M. Syed

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-32 are pending.

***Response to Remarks***

***Drawing***

2. Applicant's remarks, see pages 18-19, filed 18 November 2006, to the objection of the drawing in a non-final office action filed 08 August 2006, has been fully considered and persuasive. The Examiner withdraws the objection to the drawing.

***Claim Rejections - 35 USC § 112***

3. Applicant's arguments, see page 20, filed 18 November 2006, with respect to claims 1-6, 8, 11-14, 23-29, and 32 have been fully considered and are persuasive. The rejection under 35 U.S.C. 112 of claims 1-6, 8, 11-14, 23-29, and 32 has been withdrawn.

***Claim Rejections - 35 USC § 101***

4. Applicant's arguments filed 18 November 2006 have been fully considered but they are not persuasive. Although the applicant has amended claims 15-22 to read a computer-readable storage media, data signals, more specifically, a carrier wave, is used to transport data. The use of a carrier wave is directed to a non-statutory subject matter that is unpatentable and further addressed in the non-final office action filed 08 August 2006.

***Response to Argument***

5. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Applicant fails to define "selective sub-engine" in the specifications. To continue prosecution of the claims, the Examiner will assume the selective sub-engine to mean a parsed query that is subjected to a particular sub-engine, such as a constant number of passes over the document and determining the queries answered by each of its elements.

***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Art Unit: 2165

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 15-22 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 15-22, these claims recite a “computer-readable medium containing computer-executable instructions” Based on the Applicant’s specification, paragraph [0096], that reads “Communication media typically embodies computer-readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media.” However these data signals are not tangible, and cannot tangibly embody a computer program or process since a computer cannot understand/realize (i.e. execute) the computer program or process when embodied on the data signal. Computer program or processes are only realized within the computer when stored in a memory or storage element (such as RAM or ROM). Therefore, a data signal does not meet the “useful, concrete, and tangible” requirement as set forth in *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02, and hence claims 25-32 are non statutory under 35 U.S.C. 101. Furthermore, the Examiner refers to the Interim Guidelines

([http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101\\_20051026.pdf](http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf)) for a further explanation of the use of signals and carrier waves.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over a non-patent literature titled "Efficient Filtering of XML Documents for Selective Dissemination of Information" by Mehmet Altinel, et al., 26th VLDB Conference, 2000, pages 53-64 (known hereinafter as Altinel) in view of a non-patent literature titled "On Efficient Matching of Streaming XML Documents and Queries" by Lakshmanan et al, University of British Columbia, Canada, 2002, pages 1-20 (known hereinafter as Lakshmanan).

As per claims 1,8, 15 and 23, Altinel teaches a method, comprising: receiving an input (i.e. *"There are two main sets of inputs to the system: user profiles and data items (i.e. documents)." The preceding text clearly indicates that the optimized filter engine receives an input, which can be user profiles or data items.*)(page 54, section 2.1, paragraph 1); determining whether the input can be processed by a selective sub-engine which supports only a subset of a query language (i.e. *"When a document arrives at the Filter Engine, it is run through an XML Parser which then drives the process of checking for matching profiles in the Index."* The preceding text clearly indicates that the optimized filter engine is a filter engine and the input is a document that arrives for a filter engine to process it.)(Page 57, section 4.2, paragraph 1); and processing the input to derive

a result (i.e. *"When the XML document arrives at the system, it is run through the parser, which sends "events" that are responded to by handlers in the filter engine. This process is described in Section 4.2. Once the matching profiles have been identified for a document, the document must be sent to the appropriate users."* The preceding text clearly indicates that the input, which is the XML document is processed to derive a result, which is the matching profiles that have been identified for a document, and sent to the users.)(Page 56, section 4).

Altinel does not explicitly teach the method of if the determining indicates that the input can be processed by the selective sub-engine, then directing the input to the selective sub-engine for processing in less time than would be required by a general sub-engine which fully supports the query language; and if the determining indicates that the input cannot be processed by the selective sub-engine, then directing the input to the general sub-engine for processing.

Lakshmanan teaches if the determining indicates that the input can be processed by the selective sub-engine, then directing the input to the selective sub-engine for processing in less time than would be required by a general sub-engine which fully supports the query language (i.e. *"A more clever approach is to devise algorithms that make a constant number of passes over the document and determine the queries answered by each of its elements. This will permit set-oriented processing whereby multiple queries are processed together. Such an algorithm is non-trivial since: (i) queries may have repeating tags and (ii) the same query may have multiple matchings into a given document. Both these features are illustrated in Figure 1."* The preceding text clearly suggests that a selective sub-engine occurs in the background that produces multiple matchings in a given document.)(Lakshmanan, page 4; Figure 1); if the determining indicates that the input cannot be processed by the selective sub-engine, then directing the input to the general sub-engine for processing (i.e. *"We have implemented a MatchMaker system for*

matching XML documents to queries and for providing notification service. As an overview, XML data streams through the MatchMaker, with which users have registered their requirements in the form of queries, in a requirements registry. The MatchMaker consults the registry in determining which users a given data element is relevant to." *"A naïve way to obtain these labels is to process the user queries, one at a time, finding all its matchings, and compile the answers into appropriate label sets for the document nodes. This strategy is very inefficient as it makes a number of passes over the given document, proportional to the number of queries."* The preceding text clearly indicates that a general sub-engine is a user queries that is used to find all matchings. Unlike a specific sub-engine that returns selected matchings, a general sub-engine, akin to a user queries performs a general search that retrieves all matchings.)(Lashmanan, pages 3-4).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Altinel with the teachings of Lakshmanan to include the method of if the determining indicates that the input can be processed by the selective sub-engine, then directing the input to the selective sub-engine for processing in less time than would be required by a general sub-engine which fully supports the query language; and if the determining indicates that the input cannot be processed by the selective sub-engine, then directing the input to the general sub-engine for processing with the motivation to develop several index organizations and search algorithms for performing efficient filtering of XML documents for large-scale information dissemination systems (Altinel, Abstract).

As per claim 2, Altinel teaches a method, wherein: the selective sub-engine and the general sub-engine are encompassed by a single filter engine (i.e. *"In an SDI system, newly created or modified XML documents are routed to the Filter Engine."* *"When a document arrives at*



*the Filter Engine, it is run through an XML Parser which then drives the process of checking for matching profiles in the Index."* "A query path expression consists of a sequence of one or more location steps."  
"Each location step can also include one or more filters to further refine the selected set of nodes.")(Page 54, section 2.1, paragraph 4; page 57, section 4.2, paragraph 1; section 2.2, paragraph 2 and 3).

As per claims 3 and 11, Altinel teaches a method, wherein the determining further comprises recognizing whether or not the input conforms to a grammar of the selective sub-engine (i.e. *"For Xfilter, we implemented callback functions for parsing events of encounter: 1) a begin element tag; 2) an end element tag; or 3) data internal to an element. All of the handlers are passed the name and document level of the element for (or in) which the parsing event occurred."*)(Page 57, section 4.2, paragraph 3).

As per claims 4 and 18, Altinel teaches a method, wherein the input comprises a query language based on eXtensible Markup Language (XML) (i.e. *"XML provides a mechanism for tagging document contents in order to better describe their organization. It allows the hierarchial organization of a document as a root element that includes sub-elements; elements can be nested to any depth."*)(Page 54, section 2.1, paragraph 3).

As per claim 5, Altinel does not explicitly teach a method, wherein the selective sub-engine includes a first sub-engine which supports only a first unique subset of the query language and a second sub-engine which supports only a second unique subset of the query language and wherein the method comprises: determining whether the input can be processed by the first sub-engine or by the second sub-engine: if the

determining indicates that the input can be processed by the first sub-engine, then directing the input to the first sub-engine for processing; if the determining indicates that the input can be processed by the second sub-engine, then directing the input to the second sub-engine for processing; and if the determining indicates that the input cannot be processed by the first sub-engine, and that the input cannot be processed by the second sub-engine, then directing then directing the input to the general sub-engine for processing.

Lakshmanan teaches a method, wherein the selective sub-engine includes a first sub-engine which supports only a first unique subset of the query language and a second sub-engine which supports only a second unique subset of the query language (i.e. *"A more clever approach is to devise algorithms that make a constant number of passes over the document and determine the queries answered by each of its elements. This will permit set-oriented processing whereby multiple queries are processed together. Such an algorithm is non-trivial since: (i) queries may have repeating tags and (ii) the same query may have multiple matchings into a given document. Both these features are illustrated in Figure 1."*) The preceding text clearly suggests that a selective sub-engine occurs in the background that produces multiple matchings in a given document.)(Lakshmanan, page 4; Figure 1) and wherein the method comprises: determining whether the input can be processed by the first sub-engine or by the second sub-engine: if the determining indicates that the input can be processed by the first sub-engine, then directing the input to the first sub-engine for processing (i.e. *"A more clever approach is to devise algorithms that make a constant number of passes over the document and determine the queries answered by each of its elements. This will permit set-oriented processing whereby multiple queries are processed together. Such an algorithm is non-trivial since: (i) queries may have repeating tags and (ii) the same query may have multiple matchings into a given document. Both these*

*features are illustrated in Figure 1.*" The preceding text clearly suggests that a selective sub-engine occurs in the background that produces multiple matchings in a given document.)(Lakshmanan, page 4; Figure 1); if the determining indicates that the input can be processed by the second sub-engine, then directing the input to the second sub-engine for processing (i.e. "A more clever approach is to devise algorithms that make a constant number of passes over the document and determine the queries answered by each of its elements. This will permit set-oriented processing whereby multiple queries are processed together. Such an algorithm is non-trivial since: (i) queries may have repeating tags and (ii) the same query may have multiple matchings into a given document. Both these features are illustrated in Figure 1." The preceding text clearly suggests that a selective sub-engine occurs in the background that produces multiple matchings in a given document.)(Lakshmanan, page 4; Figure 1); and if the determining indicates that the input cannot be processed by the first sub-engine, and that the input cannot be processed by the second sub-engine, then directing then directing the input to the general sub-engine for processing (i.e. "We have implemented a MatchMaker system for matching XML documents to queries and for providing notification service. As an overview, XML data streams through the MatchMaker, with which users have registered their requirements in the form of queries, in a requirements registry. The MatchMaker consults the registry in determining which users a given data element is relevant to." "A naïve way to obtain these labels is to process the user queries, one at a time, finding all its matchings, and compile the answers into appropriate label sets for the document nodes. This strategy is very inefficient as it makes a number of passes over the given document, proportional to the number of queries." The preceding text clearly indicates that a general sub-engine is a user queries that is used to find all matchings. Unlike a specific sub-engine that returns selected matchings, a general sub-engine, akin to a user queries performs a general search that retrieves all matchings.)(Lashmanan, pages 3-4).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Altinel with the teachings of

Lakshmanan to include a method, wherein the selective sub-engine includes a first sub-engine which supports only a first unique subset of the query language and a second sub-engine which supports only a second unique subset of the query language and wherein the method comprises: determining whether the input can be processed by the first sub-engine or by the second sub-engine: if the determining indicates that the input can be processed by the first sub-engine, then directing the input to the first sub-engine for processing; if the determining indicates that the input can be processed by the second sub-engine, then directing the input to the second sub-engine for processing; and if the determining indicates that the input cannot be processed by the first sub-engine, and that the input cannot be processed by the second sub-engine, then directing then directing the input to the general sub-engine for processing with the motivation to develop several index organizations and search algorithms for performing efficient filtering of XML documents for large-scale information dissemination systems (Altinel, Abstract).

As per claims 6, 12, and 19, Altinel teaches a method, further comprising: parsing the input to determine if different sub-expressions can be identified (Page 57, section 4.2, paragraph 1); if the different sub-expressions are identified, determining if a first sub-expression can be processed by the selective sub-engine (Page 54, section 2.2, paragraph 2 and 3); if the first sub-expression can be processed by the selective sub-engine, directing the first sub-expression to the selective sub-engine for processing (Page 54, section 2.2, paragraph 2 and 3); if the first sub-expression cannot be processed by

the selective sub-engine, directing the first sub-expression to the selective sub-engine for processing (Page 54, section 2.2, paragraph 2 and 3); if a second sub-expression can be processed by the selective sub-engine (Page 54, section 2.2, paragraph 2 and 3), directing the second sub-expression to the selective sub-engine for processing (Page 54, section 2.2, paragraph 2 and 3); and if the second sub-expression cannot be processed by the selective sub-engine, directing the second sub-expression to the selective sub-engine for processing (Page 54, section 2.2, paragraph 2 and 3).

As per claims 7, 13, and 21, Altinel teaches a method, further comprising:  
obtaining a result of the processing of the first sub-expression (i.e. "*All the filters at a location step must evaluate to TRUE in order for the evaluation to continue to the descendant location steps.*") (page 54, section 2.2, paragraph 3); and processing the second sub-expression only if the result of the first sub-expression is true (i.e. "*All the filters at a location step must evaluate to TRUE in order for the evaluation to continue to the descendant location steps.*") (page 54, section 2.2, paragraph 3).

As per claim 9, Altinel teaches a filter engine, wherein the analyzer is further configured to analyze a new filter added to the filter engine and to determine an appropriate matcher with which to associate the new filter (page 58, section 4.2, paragraph 4).

As per claims 10, 17, and 26, Altinel teaches a filter engine, wherein the input language is Xpath (i.e. "*The profile model used in Xfilter is based on Xpath, a language for addressing*

*parts of an XML document that was designed for use by both the XSL Transformation and Xpointer languages.”)(Page 54, section 2.2, paragraph 1).*

As per claim 14, Altinel teaches a filter engine, wherein the at least one optimized matcher further comprises: a first selective sub-engine configured to process inputs that conform to a first subset of the input language (page 54, section 2.1, 2.2; page 56, section 4, 4.1; page 57, section 4.2); a second selective sub-engine configured to process inputs that conform to a second subset of the input language (page 54, section 2.1, 2.2; page 56, section 4, 4.1; page 57, section 4.2); and wherein the first subset and the second subset are unique subsets of the input language (page 54, section 2.1, 2.2; page 56, section 4, 4.1; page 57, section 4.2).

As per claim 16, Altinel teaches a computer-readable media, further comprising the step of accepting input messages for both the selective sub-engine and the general sub-engine by way of a single input means so that an input message sending application does not have to distinguish between the selective sub-engine and the general sub-engine (Page 54, sections 2.1, 2.2; page 56, section 4, 4.1; page 57, section 4.3; page 58; section 5, page 59, section 5.2).

As per claim 20, Altinel teaches a computer-readable storage media, further comprising the step of deriving a final result of the input message processing from at

least one result of the sub-expression processing (Page 54, section 2.1; page 56, section 4, 4.1; page 57, section 4.3; page 58; section 5, page 59, sections 5.1, 5.2).

As per claim 22, Altinel teaches a computer-readable storage media, wherein each matcher includes a set of queries against which input messages directed to the respective matchers are tried, and wherein each set of queries is unique (Page 54, section 2.1; page 56, section 4, 4.1; page 57, section 4.3; page 58; section 5, page 59, section 5.2).

As per claim 24, Altinel teaches a message processing system, wherein: the optimized filter processor further comprises a first set of queries against which a message directed to the optimized filter processor is compared (Page 54, section 2.1; page 56, section 4, 4.1; page 57, section 4.3; page 58; section 5, page 59, section 5.2); the general filter processor further comprises a second set of queries against which a message directed to the general filter processor is compared; and the first set of queries contains fewer queries than the second set of queries (Page 54, section 2.1; page 56, section 4, 4.1; page 57, section 4.3; page 58; section 5, page 59, section 5.2).

As per claim 25, Altinel teaches a message processing system, wherein: the message conforms to an XML query language; the general filter processor is configured to support the entire XML query language (i.e. *"XML provides a mechanism for tagging document contents in order to better describe their organization. It allows the hierarchial organization of a document as a root element that includes sub-elements; elements can be nested to any depth."*)(Page 54, section 2.1, paragraph 3); and the optimized filter processor is configured to support a subset of

the XML query language (i.e. "XML provides a mechanism for tagging document contents in order to better describe their organization. It allows the hierarchial organization of a document as a root element that includes sub-elements; elements can be nested to any depth.")(Page 54, section 2.1, paragraph 3).

As per claim 27, Altinel teaches a message processing system, wherein the optimized filter processor further comprises means for optimizing message processing over the set of queries included in the optimized filter processor (page 54, section 2.1, 2.2; page 56, section 4, 4.1; page 57, section 4.2).

As per claim 28, Altinel teaches a message processing system, wherein the means for optimizing message processing further comprises a hash function (Page 56, section 4.1).

As per claim 29, Altinel teaches a message processing system, wherein: the optimized filter processor is a first filter processor; and the message processing system further comprises a second optimized filter processor to which messages may be directed, the second optimized filter processor supporting a unique subset of the query language (page 54, section 2.1, 2.2; page 56, section 4, 4.1; page 57, section 4.2); and the distribution means is further configured to direct the message to the second optimized filter processor if the first optimized filter processor cannot process the message but the second optimized filter processor can process the message (page 54, section 2.1, 2.2; page 56, section 4, 4.1; page 57, section 4.2).



As per claim 30, Altinel teaches a message processing system, further comprising means for parsing the message into constituent sub-expressions, and the analyzing means is further configured to process individual sub-expression as an individual message and to evaluate sub-expression processing results to derive a result corresponding to the message (Page 56, section 4.1, paragraph 3; page 57, section 4.2).

As per claim 31, Altinel teaches a message processing system, wherein the message is a sub-expression of a parent message (Page 57, section 4.2, paragraph 1).

As per claim 32, Altinel teaches a message processing system, further comprising means for determining whether a filter in the system is associated with the generalized filter processor or the optimized filter processor (Page 54, section 4, 4.1, 4.2).

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2165

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMS



**HOSAIN ALAM**  
**SUPERVISORY PATENT EXAMINER**